



Federal Communications Commission
Washington, D.C. 20554

June 18, 2015

DA 15-701
ET Docket No. 13-49

Mr. David Don
Comcast Corporation
300 New Jersey Avenue, NW Suite 700
Washington, D.C. 20001

Dear Mr. Don:

The Office of Engineering and Technology (OET) is granting the request of Comcast Corporation (Comcast) for a waiver of Section 15.407(a)(1)(i)¹ of the Commission's rules to allow its yet-to-be deployed systems that were previously certified for operation in the 5725-5850 MHz (U-NII-3) band to obtain FCC certification for operation in the 5150-5250 MHz (U-NII-1) band.

In your letter filed July 29, 2014 you request that Comcast's outdoor access points currently authorized to operate in the U-NII-3 band be permitted to operate outdoors in the U-NII-1 band with up to 250 mW of conducted power and a power spectral density of 11 dBm/MHz with a 6 dBi gain antenna, rather than limiting the maximum EIRP above 30 degrees elevation to 125 mW (21 dBm) EIRP as required by section 15.407(a)(1)(i). You state that Comcast seeks authorization to operate 3,583 yet-to-be deployed outdoor access points certified to operate in the U-NII-3 band. You further state such a waiver would serve the public interest by providing Comcast with immediate flexibility to use the U-NII-1 band, in addition to the U-NII-3 band, to provide outdoor Wi-Fi access to its customers.² You also provide the general location of each of Comcast's proposed deployments by state, and request confidential treatment for this information under separate cover.³ You assert that the location, but not the total number, of deployments may change depending on the business needs in each region, and you request that Comcast be permitted to update OET when it makes a location change for these access points.⁴ You also confirm that Comcast has the

¹ See 47 C.F.R § 15.407 (a)(1)(i).

² See Comcast Corporation Petition for Waiver of Section 15.407(a)(1)(i) of the FCC's Rules for Outdoor Access Points Operating in the U-NII-1 Band-SUPPLEMENT(Supplemental Request) dated July 29, 2014, from David Don, Comcast Corporation. On July, 2 2014, Comcast submitted a Petition for Waiver of Section 15.407(a)(1)(i) for currently deployed devices and yet-to-be deployed devices. The Supplemental Request clarifies Comcast's initial waiver request by specifying the number of devices that are currently deployed in the field.

³ See Comcast Corporation Petition for Waiver of Section 15.407(a)(1)(i) of the FCC's Rules for Outdoor Access Points Operating in the U-NII-1 Band-Confidential Treatment Requested, dated July 29, 2014, from David Don, Comcast Corporation.

⁴ See Supplemental Request at 3-4.

David Don
June 18, 2015

ability to configure attenuation settings, and therefore can cause the device to operate below its maximum authorized transmit power.⁵ Finally, you state Comcast could reduce the transmit power, disable the 5 GHz radio, or prevent access by client devices, all from its central network management system.⁶

In the *First Report and Order (First R&O)* in U-NII 5 GHz proceeding, the Commission adopted rule Section 15.407(a)(1)(a) which allows fixed outdoor access points in the U-NII-1 band at a maximum conducted output power level not to exceed 1 W and a PSD not to exceed 17 dBm/MHz with an allowance for a 6 dBi antenna gain; the rule limits the maximum EIRP to 125 mW (21 dBm) at any elevation angle above 30 degrees measured from the horizon.⁷ In other words, each outdoor access point must limit the energy directed upward so that, in the aggregate, they would avoid causing interference to satellites operating in the U-NII-1 band.⁸ The Commission recognized that some U-NII-3 fixed access points already deployed could potentially be reprogrammed to meet the new U-NII-1 power limits and thus quickly begin more flexible operation in the U-NII-1 band using this existing equipment.⁹ The Commission stated that, if outdoor U-NII-3 band systems installed prior to the effective date of the new rules were not able to comply with the 125 mW EIRP requirements of Section 15.407(a)(1)(i) to limit energy directed upward, manufacturers or equipment operators could file for a waiver of this provision for operation in the U-NII-1 band,¹⁰ no later than 30 days after of the effective date of the new rules. The Commission stated that if the waiver is designed to enable existing deployments to operate with up to 250 mW of conducted power and a PSD of 11 dBm/MHz with a 6 dBi gain antenna, the Commission could make a quick and likely favorable good-cause determination sufficient to grant the waiver request.

The Commission asked for the following information about the petitioner's existing deployments to assess the waiver requests: the number of devices installed, general location of each deployment, ability to reprogram the devices, and ability to adjust operating power from a central network management system. The Commission concluded that waiver requests meeting these parameters and made within a short period of time are likely to serve the public interest because granting them is highly unlikely to create any risk of harmful interference, given the small numbers involved and the limited departure from the new

⁵ *Id.* at 4-5.

⁶ *Id.* at 5.

⁷ See, *Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band, First Report and Order*, ET Docket No. 13-49 , 29 FCC Rcd. 4127 (2014) (*First R&O*) at 4138.

⁸ *Id.* at 4138.

⁹ *Id.* at 4139.

¹⁰ *Id.* at 4139 – 4140. See also 47 C.F.R. § 1.3. See also *WAIT Radio v. FCC*, 418 F.2d 1153 (1969).

David Don
June 18, 2015

technical requirements for the U-NII-1 band.¹¹ While posing only a negligible risk of harmful interference, the expedient approval of such waivers would benefit the public by promptly and efficiently expanding broadband use in this band.¹² The Commission delegated authority to the Office of Engineering and Technology to consider and act on all such waiver petitions received within 30 days of the effective date of the new rules, which period expired on July 2, 2014.¹³ OET subsequently granted Comcast a waiver under the streamlined provisions described above to allow already deployed U-NII-3 systems to obtain certification for operation in the U-NII-1 band.¹⁴

On December 11, 2014 the Commission issued a Public Notice seeking comment regarding your request for a waiver of yet-to-be deployed devices.¹⁵ The sole commenter, Globalstar, Inc., stated that it did not object to a waiver grant for this limited number of compliant outdoor U-NII-1 devices given the narrow scope of this waiver request.¹⁶

We find that the information you provide regarding the yet-to-be deployed systems satisfies the technical requirements the Commission outlined in the *First R&O* for OET to act on your waiver request, and we conclude that a waiver of Section 15.407 (a)(1)(i) is in the public interest. That is, these yet-to-be deployed systems are well under the volume anticipated in the Commission's decision and should not pose a threat of harmful interference to the incumbent services in the U-NII-1 band because, as you represent, these systems can be configured for operation in the U-NII-1 band at the 250 mW operational parameters and these systems can be configured to reduce the transmit power, disable the 5 GHz radio, or prevent access by client devices, from a central network management system. This waiver applies only to the 3,583 outdoor access point systems at the locations that you identify in your letter, and does not apply to any future deployments. If you need to change the location, but not the total number, of your deployments, you must provide OET with the modified deployment information. You must demonstrate compliance with the technical requirements through the equipment certification process by filing a permissive change request along with a copy of the approved waiver.

Accordingly, pursuant to the delegated authority in Sections 0.31 and 0.241 of the Commission's rules and Section 1.3 of the Commission's rules, 47 C.F.R. §§ 0.31, 0.241,

¹¹ See *First R&O* at 4139.

¹² *Id.* at 4140.

¹³ *Id.*

¹⁴ See, Letter from Julius P. Knapp, Chief, OET to Mr. David Don, Comcast Corporation dated August 20, 2014, DA 14-1195, ET Docket No. 13-49, 29 FCC Rcd. 10002 (2014).

¹⁵ See, *Office of Engineering and Technology Declares the Time Warner Cable Inc. and the Comcast Corporation Requests for Waiver of Rules to be a "Permit-But-Disclose" Proceeding for Ex Parte Purposes and Requests Comment, Public Notice*, ET Docket No. 13-49, 29 FCC Rcd. 14792 (2014).

¹⁶ See Globalstar, Inc Comments at 2.

David Don
June 18, 2015

1.3, we waive the requirements of Section 15.407(a)(1)(i) of our rules to allow Comcast Corporation to obtain FCC certification, consistent with the terms of this waiver, for the U-NII-3 band outdoor access points you have identified to operate in the U-NII-1 band with up to 250 mW of conducted power and a PSD of 11 dBm/MHz with a 6 dBi antenna gain.

Sincerely,

Julius P. Knapp
Chief
Office of Engineering and Technology